



MISSOURI DEPARTMENT OF NATURAL RESOURCES
ENERGY CENTER – ENERGY REVOLVING FUND

PIPE INSULATION WORKSHEET

BUILDING	LOCATION	DATE
----------	----------	------

To estimate the savings of adding insulation to the outside of heat distribution pipes, the following information must be known:

- | | |
|--|---|
| The interior pipe diameter. | Bare pipe heat loss factor (use Heat Loss Factor Table). |
| The total length (feet) of pipe to be insulated. | Thickness of added insulation. |
| The pipe fluid temperature (°F). | Insulated pipe heat loss factor (use Heat Loss Factor Table). |
| The pipe room temperature (°F). | Heating plant efficiency (in percent). |
| The hours of use per day. | The energy cost (\$/million Btu) |

SAVINGS CALCULATIONS

1. Enter the bare pipe heat loss factor _____
2. Enter the insulated pipe heat loss factor _____
3. Subtract line 2 from line 1 _____
4. Enter the pipe fluid temperature (°F) _____
5. Enter the pipe room temperature (°F) _____
6. Subtract line 5 from line 4 _____
7. Enter the total length (feet) of pipe to be insulated _____
8. Enter the hours of use per year _____
9. Multiply line 3 by line 6 by line 7 by line 8 then divide by 1,000,000 _____
10. Enter the heating plant efficiency (percent divided by 100) _____
11. Divide line 9 by line 10 _____
12. Enter the energy cost (\$/million Btu) _____

ANNUAL SAVINGS

13. Multiply line 11 by line 12 \$ _____ /year

PROJECT COST

14. Enter the total cost to insulate the pipe including material, labor and design \$ _____

SIMPLE PAYBACK

15. Divide line 14 by line 13 _____ years

DESCRIPTION PAGE

Pipe Insulation Energy - Conservation Measure

Describe the existing system and the proposed energy-conservation measure (use additional sheets if necessary):